

IN THE CLAIMS

Please amend claims 33 and 40, as shown below. Please add new claims 63-65 . The following listing of claims replaces all prior listings.

1-32 (Canceled).

33. (Currently amended) An optical assembly configured to receive a sample, the assembly comprising a ball lens and a trifurcated fiber adapted for dual optical interrogation and in optical communication with said ball lens, the assembly further including a reagent dispenser, wherein the assembly is configured to detect a light signal while the reagent is being dispensed into the sample.

34. (Original) The optical assembly of claim 33, wherein said trifurcated fiber comprises a first optically isolated emission bundle to collect light, second optically isolated emission bundle to collect light, and an excitation bundle.

35. (Original) The optical assembly of claim 34, wherein said ball lens is separated from said trifurcated fiber by a transmission space.

36. (Original) The optical assembly of claim 35, wherein said ball lens comprises a sapphire material.

37. (Original) The optical assembly of claim 36, wherein said ball lens comprises an anti-reflective coating.

38. (Original) The optical assembly of claim 33, wherein said trifurcated fiber comprises a first plurality of emission bundles for receiving light of a first wavelength and second plurality of emission bundles for receiving light of a second wavelength and said first

plurality of emission bundles and said second plurality of emission bundles are randomly distributed in plurality of excitation bundles.

39. (Original) The optical assembly of claim 33, wherein said trifurcated fiber comprises a first set of bundles for transmitting light of a first wavelength and second set of bundles for transmitting light of a second wavelength and third set of bundles for transmitting light of a third wavelength.

40. (Currently amended) The optical assembly of claim 39, wherein said trifurcated fiber is separated from said ball lens by a transmission space of about 0.1 mm to 1 mm.

41. (Original) The optical assembly of claim 35, wherein said ball lens comprises either sapphire material or a silica material.

42. (Original) The optical assembly of claim 39, wherein said first set of bundles and said second set of bundles are coaxially arranged with respect to said third set of bundles.

43-55 (Canceled).

56. (Original) An optical fiber assembly, comprising a trifurcated fiber comprising a first plurality of emission bundles for receiving light of a first wavelength and second plurality of emission bundles for receiving light of a second wavelength and said first plurality of emission bundles and said second plurality of emission bundles are non-randomly distributed in plurality of excitation bundles.

57. (Original) The optical fiber assembly of claim 56, wherein said first set of bundles and said second set of bundles are coaxially arranged with respect to said third set of bundles.

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58. (Original) The optical fiber assembly of claim 56, wherein said first set of bundles is coaxially arranged with respect to said second set of bundles.

59-62 (Canceled).

63. (New) An optical assembly, comprising a ball lens and a trifurcated fiber adapted for dual optical interrogation and in optical communication with said ball, wherein said trifurcated fiber comprises a first set of bundles for transmitting light of a first wavelength and second set of bundles for transmitting light of a second wavelength and third set of bundles for transmitting light of a third wavelength.

64. (New) The optical assembly of claim 63, wherein said trifurcated fiber is separated from said ball lens by a transmission space of about 0.1 mm to 1 mm.

65. (New) The optical assembly of claim 63, wherein said first set of bundles and said second set of bundles are coaxially arranged with respect to said third set of bundles.